Amendments to the Claims:

Please amend the claims as indicated. This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (currently amended) A method of surveying boreholes, comprising:

providing an instrument package in a leading end of a drillstring, said instrument package comprising first and second single-axis sensors mounted for rotation with the drillstring about the rotational axis of the drillstring, the first sensor being an accelerometer and the second sensor being a magnetic fluxgate or a rate gyro;

rotating the drillstring;

deriving solely from the first sensor the inclination angle of the drillstring at the instrument package; and

deriving solely from the first sensor and the second sensor the azimuth angle of the drillstring at the instrument package.

2. (currently amended) The method of claim 1, wherein the ~~sensor is~~ sensors are radially spaced from the borehole axis and ~~has its~~ have their sensing ~~axis~~ axes in a plane containing the borehole axis and an axis perpendicular thereto.

3. (currently amended) The method of claim 1, wherein the ~~sensor is~~ sensors are radially spaced from the borehole axis and ~~has its~~ have their sensing ~~axis~~ axes in a plane parallel with the borehole axis.

4. (currently amended) The method of claim 1, wherein the drilling control rotation angle is obtained from the ~~sensor~~ outputs of the sensors.

5. (currently amended) The method of claim 1, wherein the ~~sensor~~ outputs of the sensors are integrated over each of the four quadrants of rotation and the desired output angle is derived from the integrated output.

6. (original) The method of claim 1, wherein the instrument package suitably includes rotation angle reference means for use in the integration.

7. (currently amended) The method of claim 1, wherein additional information is derived ~~such as~~comprising the local gravitational and magnetic field vectors.

8. (currently amended) An apparatus for use in surveying boreholes, the apparatus comprising:

an instrument package adapted to be included in the leading end of a drillstring, the instrument package comprising first and second single-axis sensors mounted for rotation with the drillstring about the rotational axis of the drillstring, the first sensor being an accelerometer and the second sensor being a magnetic fluxgate or a rate-gyro; and

computing means for deriving solely from the first sensor while the drillstring is rotating the inclination angle of the drillstring at the instrument package, and for deriving solely from the first sensor and the second sensor while the drillstring is rotating the azimuth angle of the drillstring at the instrument package.

9. (currently amended) The apparatus of claim 8, wherein the ~~sensor is~~ sensors are radially spaced from the borehole axis and ~~has its~~ have their sensing ~~axis~~ axes in a plane containing the borehole axis and an axis perpendicular thereto.

10. (currently amended) The apparatus of claim 8, wherein the ~~sensor is~~ sensors are radially spaced from the borehole axis and ~~has its~~ have their sensing ~~axis~~ axes in a plane parallel with the borehole axis.

11. (currently amended) The apparatus of claim 8, wherein the computing means operates to integrate the ~~sensor~~ outputs of the sensors over each of the four quadrants of rotation and to derive the desired output angle from the integrated outputs.

12. (original) The apparatus of claim 8, further comprising rotation reference means for use in the integration.